

Name of work :- Construction of Kagvad Bypass Road (NP) Km.0/000 to 1/900 Ta.Jetpur, Dist.;
Rajkot (Package No.RAJ/BUJ/2023-24/P01)

BILL OF QUANTITIES

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
1	Clearing and grubbing of road land incl.uprooting rank vegetation, grass, bushes, shurbs, saplings and trees girth upto 300mm removal of stumps of trees cut earlier and disposal of unserviceable materials © By mechanical means in area of Light jungle.	4.80	One Hect .	28393.03	136286.54
2	Earthwork for embankment including breaking clods, dressing with all lead and lift (Excluding watering and consolidation) (A) Selected soil should be From borrow area with all lead and lift and should have CBR not less than 6.00%.	36182.40	One Cum	150.38	5441109.31
3	Earthwork in cutting in all sorts of soil and soft Murrum including conveying and spreading the suff embankment as and where directed within 200 meters from the end of the cutting with all required lead and lift.	2482.20	One Cum	128.06	317870.53
4	Granular Sub-base with Black trap crushed stone well Graded Material (Table.400.1) by Mix in place Method. Construction of Granular Sub-base by Providing Black Trap cruhsed stone well greded material, spreading in uniform layers with motor graded on prepared surfce, mixing by mix in place method with rotavator at OMC, and compacting with Vibratory roller to achieve the desired density, complete as per Technical Specification Clause-401. For Grading-1 Materials.	4829.80	One Cum	629.33	3039538.03

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
5	WBM Grading-1 Providing, laying, spreading and compacting stone agg. Of 90mm to 45mm size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 KN in stage to proper grade and camber, applying and brooming, stone screening/binding material to fill-up the intersties of coarse agg., watering and compacting to the required density grading-1 as per Technical Specification Clause.405 By manual means.	288.00	One Cum	1027.47	295911.36
6	WBM Grading-2 Providing, laying, spreading and compacting stone agg. Of 63mm to 45mm size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 KN in stage to proper grade and camber, applying and brooming, stone screening/binding material to fill-up the intersties of coarse agg., watering and compacting to the required density grading-2 as per Technical Specification Clause.405 By manual means.	313.10	One Cum	835.47	261585.66
7	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	3809.50	One Cum	665.48	2535146.06
8	Rolling and Watering of earthwork with vibratory roller including filling in depression which occur during the process and as directed.	36898.40	One Cum	22.48	829476.03

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
9	Providing and applying primer coat with bitumen emulsion SS1 on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.75kg/sqm using mechanical means,	16388.00	One Sqm	65.80	1078330.40
10	Providing, laying and rolling 50mm thick compacted bituminous Macadam (B.M.) in one layer with B.T. aggregates as specified and using Emulsion RS1 for tack coat at the rate of 2.50kg/10sqm (As per IRC-16) and using bitumen for mixing with agg. at the rate of 3.40% i.e 34.00kg/MT of total mix including mixing in Drum mix plant and spreading the same by paver finisher and consolidation with vibratory roller including necessary including cost of hire charges, firewood, oil, lubricants, labour charges, etc. by using constructor's own Drum mix plant, machineries and equipment, tools etc. complete in accordance with the requirement of specification.	1950.00	One MT	2399.45	4678927.50
11	Providing and laying S.D.B.C.using B.T. stone chipping and aggregates at 0.66Cum/M.T. as per MORTH gradation, asphalt grade VG 30 (60/70) for mixing at the rate of 51.00 Kg/M.T. of total wt. of mix i.e. (5.10% of total wt. of mix) including heating the asphalt and aggregates by continuous batching Drum mix plant & spreading the same by paver finisher and consolidation with 8-10 tonnes vibratory and power roller and flushing of sand at the rate of 0.30 Cum/10 Sqm. including providing all materials, equipments tools and plants fire wood oil, kerosene labour charges using contractor's own machineries drum mix plant and paver finisher.	1023.00	One MT	3138.37	3210552.51
12	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (B) Dense or hard soil.	999.20	One Cum	241.79	241596.57

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
13	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (C) Hard Murrum	720.30	One Cum	412.00	296763.60
14	Excavation of foundation in hard murrum and boulders and very stiff or sticky clays and other similar strata including shorting out and struting and dewatering as necessary and disposing of the excavated stuff as directed.	1552.40	One Cum	582.21	903822.80
15	Excavation in large boulders and soft rock by wedging including shoring, strutting and dewatering as necessary and disposing of the excavated stuff as directed,	457.80	One Cum	682.43	312416.45
16	Excavation in hard rock by dry-wet blasting and chiseling including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff as directed (B) Blasting prohibited.	245.00	One Cum	1595.52	390902.40
17	Providing and fixing Mild steel dowel bar of minimum 32mm dia. For anchoring by drilling holes in foundation strata including necessary bending, hooking of dowel bars and grouting the holes complete as per detailed drawing and as directed.	75.00	One Rmt.	448.26	33619.50
18	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary pin headers including shuttering, scaffolding, laying vibrating, curing and finishing complete Without V-Grooves For all Hieght.	2335.00	One Cum	3801.33	8876105.55
19	Providing and filling in foundation with ordinary cement concrete M-100 mix and providing necessary vertical pin headers incl. Formwork, vibrating, ramming and curing complete.	515.80	One Cum	3228.29	1665151.98
20	Providing and casting in situ Controlled cement concrete M-200 for R.C.C. work in Piers, abutment, returns and riding returs as per drawing including centering, shuttering, scaffolding where neccesary laying, vibrating curing and finishing complete (A) For all Height	1624.20	One Cum	4993.94	8111157.35

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
21	Providing and casting in situ Contolled Cement concrete M 200 mix for R.C.C. works in pier cap, abutment cap, and dirt wall including controlled cement concrete M 250 bed block or pedestals for required size below bearings as per detailed drawings, centering, shuttering, scaffolding wherever necessary laying, vibrating, curing and finishing complete.	53.50	One Cum	5072.87	271398.55
22	Providing and casting in situ Controlled cement concrete M 250 for R.C.C. Solid slab including centering, scaffolding, curing and finishing complete.	231.00	One Cum	5066.93	1170460.83
23	Providing and casting in situ Contolled cement concrete- M-200 for average 75/150/200mm thick wearing coat laid as directed incuding. tamping, vibrating, finishing, curring and filling in joints with bitumen complete.	280.70	One Cum	5103.46	1432541.22
24	Providing and casting in situ Contolled cement concrete- M-200 mix for Approach slab including formwork, curing and finishing complete.	36.50	One Cum	4961.63	181099.50
25	Providing and casting in situ Controlled cement concrete- M-200 mix for kerbs/Kerb blocks including formwork,curing and finishing complete.	9.00	One Cum	4689.85	42208.65
26	Providing and laying weep hole in Abutment and returns by using A.C pipe of 100mm. Incl. fixing in proper grade and jointing the complete as per detailed specification.	741.00	One No	82.56	61176.96
27	Providing and laying filter media 600mm. thick directed at the back of abutments, returns and wing walls as per detailed specifications.	124.60	One Sqm	1180.33	147069.12
28	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in fixed end as per detailed drawings including cutting bending and welding complete.	30.00	One No	339.87	10196.10
29	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in free end as per detailed drawings including cutting bending and welding complete.	30.00	One No	396.27	11888.10

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
30	Providing and laying in Position FE - 500/500D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings for the following (A) Piers (B) Abutments (C) Returns (D) Walls etc.	24.910	One MT	73217.52	1823848.42
31	Providing and Fixing in position FE-500/500D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawaing (A)RCC kerb (B) RCC Footpath (B) RCC Solid Slab/ App. Slab / Wearing coat.	25.840	One MT	72601.86	1876032.06
32	Providing 12mm. Thick Pre-moulded asphalt filler joints as per drawings	39.60	One Sgm	702.12	27803.95
33	Providing G.I. 100mm. Diameter water spouts including necessary iron gratings as per drawings.	20.00	One No	536.02	10720.40
34	Providing flood gauge marks on sub structure as per design including painting complete	9.30	One Rmt.	159.07	1479.35
35	Filling available excavated earth (excluding rock) in trenches plinth sides of foundation etc. in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering.	3299.40	One Cum	130.39	430208.77
36	Numbering the CD work with approved paint including all materials for painting etc. complete.	2.00	One No	58.80	117.60
37	Supplying and fixing reinforced concrete heavy duty non presure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joinng the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 900mm Dia.	175.00	One Rmt.	3475.63	608235.25
38	Supplying and fixing reinforced concrete heavy duty non presure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joinng the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 600mm Dia.	37.50	One Rmt.	1971.41	73927.88

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
39	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Stone/Rubble masonry.	23.00	One Cum	389.73	8963.79
40	Dismantling G.I. Pipes G.S.W. Pipes and A.C Rain water pipes with fitting and clamps including stacking the materials with all lead and lift (for any of pipe)	15.00	One Rmt.	73.02	1095.30
41	Providing and fixing Precast cement concrete Hectometer as per IRC type design incl. painting, lettering etc. fixing in C.C. 1:5:10.	7.00	One No	356.49	2495.43
42	Providing and fixing Precast cement concrete Guard stone as per I.R.C. type design including white washing etc. complete. Fixing in C.C.1:5:10.	240.00	One No	346.78	83227.20
43	Providing and fixing ordinary Kilometer stone of pre-cast C.C. 1:2:4 including necessary reinforcement as per I.R.C. type design in C..C. 1:4:8 including painting lettering etc. complete.(For VR, ODR)	3.00	One No	704.33	2112.99
44	Providing and fixing Indicator stone of approve stone as per I.R.C. type design in C.C. 1:4:8 including white washing etc. complete Fixing in Earth	85.00	One No	102.84	8741.40
45	Supplying and fixing Junction Boards of M.S. plates and angles as per I.R.C. design incl;. Fixing in C.C. 1:4:8 with necessary excavation painting, figuring, lettering on boards etc. complete.	4.00	One No	5236.69	20946.76
46	Providing and fixing Village name Boards as per standard I.R.C. type design of steel plate incl. painting, lettering etc. complete with fixing in C.C. 1:4:8 block with necessary excavation etc. complete	1.00	One No	3437.59	3437.59
47	Providing and fixing Road sign of M.S. plate and angle iron incl. painting, lettering etc. complete. fixing in C.C. 1:4:8 block with necessary excavation etc. complete as per IRC type design (i) Reflective Type.	8.00	One No	3072.98	24583.84

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
48	Providing and fixing Flood guage post mark of 'C' angle size 100mm x 50mm x 6mm thick of length 2.00mt. Height fixed in head wall 0.500mt. And 1.50mt. Out side with painting and lettering with redeum color as directed.	2.00	One No	1134.23	2268.46
49	Village/Bump Ahead sing : Providing and fixing sign boards made out of 2mm Aluminium sheet size 90x60 cms. Rectangle as per the design of IRC-67-1977 pre treated with phospheting process and acid etching coated with one coat of apoxy primer and two coats of best quality epoxy paint reflectorised with retro reflective sheeting as per latest MOST specification letter and numbers should be as per IRC:30-1968, 3.1 Mt. long (2 nos) stand post and frame fabricated from suitable size iron angle of 50x50x5mm, painted with best quality epoxy coating in black and white bends, the details of symbole on inscription/ numerals for each board shall be as per the instruction of the Engineer in charge. The fixing at site shall be in C.C 1:2:4 block of size 45x45x60cms. for each leg including excavation curring etc. complete under the supervision of engineer in charge (A) Engineer Grade.	8.00	One No	5045.36	40362.88
50	Hazard Marker Sign :-Providing and fixing sing boards made out of 2mm aluminium sheet; size 90 x 30cms. rectangle as as per the design/drawing attached (IRC) pretreated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro refiective sheeting as per latest M.O.S.T. Specifications; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm & 50 x 50 x 5mm painted with best quality epoxy coatings The fixing at site shall be in 1:2:4 CC block of size 45x45x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A) Engineer Grade(VR)	8.00	One No	2423.73	19389.84

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
51	Cautionary Warning Sign : Providing and fixing sign boards made out of 2mm Aluminium sheet size 90x90x90 cms. Equilateral triangle as per the design of IRC-67-1977 pre treated with phosphating process and acid etching coated with one coat of epoxy primer and two coats of best quality epoxy paint reflectorised with retro reflective sheeting as per latest MOST specification 3.1 Mt. long stand post and frame fabricated from suitable size iron angle of 35x35x3mm, 75x75x6mm. as required painted with best quality epoxy coating in black and white bends the details of symbole for each board shall be as per the instruction of Engineer in charge the fixing at site shall be in 1:2:4 CC block of size 45x45x60cms. for each leg including excavation curring etc. complete under the supervision of engineer in charge (A) Engineering Grade.	2.00	One No	3808.65	7617.30
52	Citizen's information Board. Providing and fixing of typical MMGSY information board as per instruction. Two MS sheets of 3 mm thick, of 900 mm x 750mm size fixed at top & bottom duly rivetted with MS angles of 25 x 25 x 5 mm thick M.S angle shall be welded by two vertical M.S angle of 5 mm thick to 75 mm x 75 mm of 12 SWG square tubes posts duly embedded in cement concrete M-15 grade blocks of 600mm x 600mm x 750mm, below ground level. The letters & figure of any shade reflectorised with High Intensity Prismatic Grade Retro Reflective Sheeting of Type-4 as per ASTM D-4956 and latest MORD specifications; All sections of framed posts and steel tube will be painted with primer and two coats of epoxy paints as per drawing Clause 1701 and Annexure 1700.1 (10.16). (A) Class-B High intensity Grade Retro Reflective sheeting.	1.00	One No	7740.64	7740.64
53	Road Marking with Hot Applied paints with reflectorising glass beads on bitumin surface providing and laying a hot applied thermoplasting compund 2.5mm thick including reflectorising glass beads @250 gm per sq.mtr area, thickness of 2.5mm is excluding of surface applied glass beads as per IRC:35-2015 the finished surface to be level, uniform and free from streaks and holes, zebra patta/bump/centerline/edge line/ cut patta. the while color marking should provide liminance coefficient on cement road shall be min. 130 mcd/m2/lux and asphalt road shall be min 100 mcd/m2/lux during the survice life during the date the marking should meet the performanace criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015 warranty for retroreflectivity shall be two years.	478.00	One Sqm	367.72	175770.16

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
54	Cate eye / road stud/ RPM : Supplying Raised Pavement markers of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens (No glass bead lens) capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 type H and complying to specification of category A of MORTH circular No RW/NH/33023/10-97-DO III Dt. 11-06-1997. the height, width and length shall be exceed 20mm, 130mm and 130mm and with minimum reflective area of 13sqcm on each side and the slope to the base shall be 35+/-5 degree. the body of the marker should having finger grip for easy and accurate placement and application with epoxy /bituminous adhesive as recommended by the manufacturer of the marker. the colour of the marker should be as per the IRC:35-2015 and as directed by Engineer-in-charge.	457.00	One No	326.23	149087.11
55	Providing and erecting a "W" metal beam crash barrier comprising of 3mm thick corrugated sheet metal beam rail, 70cm above road/ground level, fixed on ISMC series chanel vertical post, 150x75x5mm spaced 2m center to center, 1.8m high, 1.1m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to confirm to IS: 1367 and IS 1364 metal beam rail to be fixed on the vertical post with a spacer of chanel section 150x75x5mm, 330mm long complete.	235.00	One Rmt.	4938.09	1160451.15
Rupees Five Crore Twenty Five Lakh(s) Fifty Four Thousand Nine Hundred Seventy Four And Paise Sixty Nine Only					52554974.69

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I \ We am \ are willing to carry out the work at % above \ bellow percent (Should be written in figures and words) of the estimated rate mentioned above. Amount of My \ Our tender works put as under.

* Estimated Amount

Put to tender **Rs**.....

Deduct.....%

Net **Rs**.....

In words.....

* Estimated Amount

Put to tender **Rs**.....

Add.....%

Total **Rs**.....

In words.....

1.The Contractor shall exhibit a board with detailed specification and details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.

2.The labour cess will be deducted as per prevailing rules i.e. 1% of the work done.

3.GST and Income tax TDS will be deducted at a source while making payments of bills

4.In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017 Cement Consumption/16/C Date:11/05/2017 as stated in S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

NOTE: Amount Rs.61511/- Of Dismantalled materials shall be recovered from 1st R.A. bill of Contractor at once.

Signature of Contractor.

Deputy Executive Engineer
Panchayat R&B Sub Division
Jetpur

Executive Engineer
Panchayat R&B Division
Rajkot